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## DAMELC. SNEIL

A HORKBOOK OJ (UNBMORAT SRGWS

## 1 ratima

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3 tudies

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DANJEL C SNELL

A HORKBOOK OF CUNEIFORM SIGNS

Undens
Pubsicaclons

Slolima
1075

Fdilot: Gıotéo Buzellai



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 sysiem, whoul permission In wititne from the publisfeci.


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Paadivo reedgrition is the usual goal of learning eunoiform signa in Akkadian instruetion in Europe and Amorica. A methot oncouraging active use of the signs is prosented hero on tho grounds that an actlvo knowlodgo of tho slgns will atay longor with the studont.

The ldoa for thia workbook is taken Erom Japanoso Kana Workbook by P. G. O'Nolll (Palo Alto and Tokyo: Kodansha lntornationsi, 1967), which I have found succoaaful in toaching tho Japaneso syllabary. (1)

Tho algns to bo taught were ehoaon on the basls of thelr froquoncy In Glorglo Buccellatl's list of oigh fre-
 dondache Brifico (3) I am much obllged to Buccellatl and his studonts for this matorlai and to him and Plotr Mlehalowski for other helpful conments. All slgns pressentad here pceur as more than 0.10x of that corpus. For aimplielty only the more Erequontiy atteatod valuoa of the algna are taught hera,

I have used Buccoliati'a iist of aign frequoneies because it is the only one avaliabio to mo, but it doos lntroduce a logical contradiction into this work: thouth the sign forma aro Noo-Assyrian, the signs taught are chosen on the basis of a corpus from 1000 yoars earlier. This contraaletion can ba accepted on the grounds that the Old Babylonian perioz is in many ways regarded aa a ciassical period both by the ancients who looked back to $1 t$ for norms in various areas and aiao by miderns who froquently uso its rolatively simpie ayliabary and texts for boginning instruetion in Akkadian. One might argue that it would have beon vaiuablo to present the algra in their old Eabyionian forms, but that would mako it difflcult for the boginnor to consult the various manuaia that are organkzod aceording to Neo-Aaayrian sign forms.

Thls work 19 not, obviously, an originai contribution to syllabary stự, but moreiy a systematle way of loarning aome of tho moro Ereguently used slgna. Ideaily it should bo usod aa part of a course with a toacher who will ask students to learn stgn vaiues and signa that will be of tae to them in the roadings planned. It shouid bo uaod in conjunctlon wlth R. Labat's Manuol d'Eplaraphlo akkadlenne (sth ed, Parls: Geuthner, i976), which gives a moré complote liat of sign values frofn all perioda of eunciform wrlting as weli aa

Lhe algn Eorms in the major pertods. W, von Soden and W. Rolll's ${ }^{\text {a }}$ Das Akkadngche Syllabar (3rd ed., Rome: Pontifucal 日lblifal Institute, 1976 \} til also be uselul in that it presents attestations for the syllable valuas in various perioda.

I wonld suggest that the atudant try to learn three or four signs a day and that be work on them every day for at loast a short time so as not to lose the knowlodge gained. The student should concentrato on the vocabulary which his tascher recomanda and which occurs in the texta he is readlng and not pay much zttention to that usad hure. Tha point throughout this workbook is to learn the slgns and not the vocabulary. It has not always been posslble to use real words In the examplog sinca, especially at the beglaning, tho student Wlll not know eaough slgha. Though thig practlee may not be sclontlflcally gratiEyling, there 15 good precedent for 16. (4) In any came, it shoula bo strossod that thia manual is intendied to teach the practleo of reeognizing the graphia gtructura of individual eunelform slgns, not tho theory of the praphemac systom; honce rara spellings or rare words, as well as sign conflguratlona without laxical meaning, appear justifiable on psedagoslcal grounds. Note that an ateraah (*) preceding a form glven afen example thows that that partleular epoling la not actually attested. The numbar befora tho flrat occurronco of the 51 gn Indleates its number in Labat's Manuel. (5)

At the end of the workbook ord whll flra an alphabetleal Indox of the values presented hare, ard there la an index to the sugns in tho order taught.

I owe a dobt of thanks to the students in my beginning Akkadian claas at the Unlvareity of Washlngton in 1975-1976, and to thoae in the elass of benjamin foster at Yale in the a ame year for thelr helpful criticlsma. patrlela $s$. Guatafaon a help has beon important at aeveral stagss of tho workbook's davelopment, ano 1 ar tharkful to her. A grant from the Connactleut College Faculty Research and Travel Pund supported the final typlng of the manuserlpt, and the aympathetic support of that lbstitution $1 s$ deeply appreclated.

I presont thls workbook in memory of Clalr John Snoll, who alweys belleved that an intelligont porson with a grood book could leam arything.

DCS
Neve London, Connoctleut Nay 1978

Nates<br>to<br>Introduction

(1) Compare 5. Lieberman, The Sumerian Loanwords in Old-Babylonian Akkadian th5s 22, Missaulai Scholara, 1977, esp. pp. 551-55日, for a stimulating application of data on the Japaness writing system to curdefform problems.
(2) Forthcoming in the series: Cybernetica Masomotamica: Graphemic categoriz\%tion, Undend pubileations.
(3) (Laiden: Brill, 1964- . The non-rayal corpus was chosen because it is larger chan ths royal corpus. No attempt was made to compere the two.
(4). Ses the roview of [1. H. Roop, An, Introduction to the Burmess Writing System (New Haven, 1972\} JAÓs 95,3 (1975) $536 f$ by J, A. Matisoff. Matisoff observes, "Ths step-by-ytep preventation mukes it necessary for Roop to use monsense syllables to iliustrats many consornant-vowel combinations. Far fron boing a defect..., this trains the student frou the dutset to view Burmeso writing as a iogi= cal systom that he çan use productivaly, it encourages him to guess at the spelling of words he has heard but not yet scen writton down."
(5) The order of ths aigns poes back apparentiy to Edwin Norris in 1868; see the note by k. Hacker, 2 A 63 (197t) $305 \mathrm{n}, 2, \quad-A k k a d i a n$ words in this wor'sbook aro underlined: Sumerian words, usually the logographic reading of the figns, are given all in capitals, A logogram is a sign that stands for an entire word, In Akkadian texts Sumerian words are freguentiy used to stand for their Akkadian equivalsnts.

## Section Ore

Thiv workboak is divided into boxos: in the boxes you are to write responses to questions, usually the Engllsh pronunclatlons, termed transliterations, of signs or the signs thomselves. To the right of the next box bolow you will find the correct anewer quven. Instead of actually \{111lng in the responees one could write reeponecs on paper placed under the bos and alsa covering tho correct answer; then one could go through parts of the book several thes without having to erase tho answers.

The sagns will be presented for ease of memafy not in the order of our alphabot but in the order of their shapes. Thls is the order used in Assyriolugical manuais. The order ts from horizontal p- to $\mathcal{A}$ to verticai $T$. Each part of the slgn is ordered independently so that, for example, all signs that begin with a singla werige come before any that begin with two. Remembering the order of the signs in nat fapartart, but it may be useful to remember which sight look ilke others, how they differ and how they are ailke.

Correct answers to questions asked $1 \pi$ the larget box on the left abovo will be given in this columa.

1 The first align is pronounced abd．In Assyr－ iology as in other language studies，总 equals English sh as in shtg．As is written：p－ Make the wedge first，then draw the line：

：－is the usual sign in many periods for the syllable $\qquad$ ．

5
repeated

Carefully copy the sign for as $_{3}$ unto $\ddagger 1$ you feel confident about remembering it．


What does the symbol 道 stand for in English writing？ $\qquad$ －
$\nabla$
repeated

The second important sign begins with wedge\{早, follawing the convention that the several signs that begin with one wedge precede thase that begin whth two.

5
It is ba: $\eta^{1}$.
Copy tt careEully, Btarting wich the leftmost wedge and working to the rlght.

| $t$ | $m$ | rr | $n$ |  |
| :--- | :--- | :--- | :--- | :--- |

Practice ba untll you can remember it.
one

| Practice ba untli you can remomber it. |  |
| :--- | :--- |
| rrr |  |


$\qquad$

Transliterate thia Akkadian word:


6 The $\operatorname{sign}$ tu is similar to bs, hr , but has two verticals instead of one: 7 . Practice gu:


It is easy to confuse ba,
 2느,

repeatod
The group of signs r- ming, but it would be transliterated man means
$\qquad$

| Practice $\frac{z u}{}$ and ba until you fol confident | aš-ba-zu |
| :--- | :--- | you can tell them apart:




23 The next sign is HT, fead DINGIK, the Sumerian word for 'god'. In Akkadian contexts this reading occurs as a determinative before names of gods; in transliteration tt appears as a raised d before the gods' names. DINGIR also has a syllabac reading as the syllable an. Oniy context can determine whether the logographic or syllabic value is mearat. Practice it until you think you can repember $\pm t: r$, $r$ H7


| Transliterate: |  | 4it $r^{2}$ <br> 以 | $=$ |  | H7 <br> repeated |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Put into cuncitorm: $\frac{\text { zu ba }}{\text { a }}$ 令 DINGIR |  |  |  |  | DIKGIR ba DINGIR z를 (no seanings) |
|  |  |  |  |  |  |
| Practice DINGIR. |  |  |  |  | $\begin{aligned} & \text { mon } \\ & \square \text { hr } \end{aligned}$ |
| DISCIR | DINGIR | DINGIR | DINGIR | DINGIR |  |
| DIKGIR | DINGIR DINGIR |  | DINGIR DINGIR |  |  |
|  |  |  |  |  | $H^{+}$ <br> repeated |



55 The next sign is lat：情 ．Note that it has three wedges following the initial ont． Try it：H ，HV ，㥰 ．


Transliterate：rita He

$=$


Put into cuneiform：＊la－ba－as＂may I not be
$\frac{k a-1 a}{1 a 11^{\prime}}$ put to shame＂
ba－1a－1a

（accusintiva）

Put into cuneiform：zゅ－1 alan（no meaning）



Practice la until you feel confident about lt；draw the wedge first for each line．

repeated


59 The next sign differs frow tu，rel at，in that it has another vertical and alma in that the top horizontal has a tail．The sign 15 I1，ry＂tirit

$1 i$
$1 i$ 11.

11 11


Put into cuneiform：
1i－1a－tu＇night．
ba－11（no meaning）
reported


E1 The mu sign is res ．Though simpler than tu and li，it is perhaps harder to make because the trailing wedges are at am angle． Practice it：$t$ ，th，the ，the


Transliterate：
㙁

Fut into cuneiform：
1a－ba－y解（no meaning）


Mu－tu
＇husband＂
kaーlaーロu ＇everything＂

Practice mu until you feel some confi－ dance with it：



62 The next sign is qa, hr . Though it resembles ba, ry , one can remember that it is simpler than ba and has one wedge at an angle. Try it: $\gamma$, $\boldsymbol{H}$, H.
 your mind froth ba.

| qa | qa |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | ba |
| qa |  |  |  |

68 The next sign is ry，矣II ．Draw the hort－ zontal first，then the verticals，then stick in the two diagonal wedges：，，III，SlIT． Try it：



70 The next sign is na, his, written br,険, it as be plus part of ga:


73 The next important sign is ti, $p \lll<$, which starts like be: $\forall \sim$, $\mathrm{HT}, \mathrm{HK}$, and has a wedge on the other side of its vertical in contrass to na, WT . Try it:


Transliterate:

$\square$
$r \lll$
repeated

Put into cuneiform:
$\frac{\text { qa-ti-ka }}{\text { of your }}$
hand ${ }^{\prime}$
baーlaーț
"of the life"

| ba-ga-ru-ti |  |  |  |
| :--- | :--- | :--- | :--- |
| (no moaning $!$ |  |  |  |





MR W- F
repeated

75 The next sign is nu, which is 苃 plus a cross strake running from below to above $1 t$ : Try it:

 $\qquad$
$\qquad$

$$
\because \operatorname{mat}^{2}=
$$

$\qquad$

Put into cunelfarm:

zu-nu
as-nu-ks (no meaning)

Practice nu until you feel sure of It.


HT

On the next page is a quiz on all the signs studied so far. Write the signs in the appropri-
repeated ate boxes and turn to the next page for the artswers.

## Section One

QuIz

3. 21

6. 1a

9. be

12. 54

15. IU


## ANSWERS



If you Eorgot one sign, practice it below and then go on. If you forgot more than one, go back to the sections in which the signs were presented ant work through thera agsin; then go on to page 19.

Sign $\qquad$ :


## Section Twa

78 The next sign is bu, WK , which starts like be: $H$, HK, HKP, The symbol $b$ is used to indicate a sound like German ch in Huch or ScotElah ch as in loch. Try gur


79 The next sign is nam, his , which begins like bu, bY, but adds four wedges after:



80 The next 51 gn is ik , ig, which begins with hu but adds only twit wedges: HKa . Try it:


Transliterate: $+k T A b k=$


Put into cuneiform:

-ig-be
'he said $\frac{\text { ik-ru-ba }}{\text { he prayed }}$

Practice fk and be suro to keep it separate In your mind from nam.


PTR 54

## 1RTK 1RTS

repeated

84 The sign zi, bifk, begins a new serios of shapes. Note especially the arrangement of its
 Try it:


§5 The next sign，gi，值 $A$ ，is easily confused with $\# 1$ ，Note that the final element $\therefore$ th 15 open just as the letter $\underset{\text { z }}{ }$ is open，while 난 in gi o is closed lake g．Try gi：


Transliterate：情
$a$


F18
म干然 HTA
$=$
repeated

Put into suneiform：



86 The next sign，ri，re，HT K ，resembles bu， WT，but has one fore vertical before the diagonal wedge：H，Hत ，Hर ，Hर ，Try it：

$\qquad$
Transliterate：
以下T 以下 以近 $=-\infty-\infty-\infty-\infty \quad l$

HTS repeated WT HKT HI


94 The next af gr is tim, Ho . It begins somewhat like ri, WRit , but has a wedge at the foot of the first vertical and then three slanting wedges forming a triangle.


97 The next sign is ak, aq, ag, roth + It resembles ka, HFF , though orly superficially.





 * $\qquad$ repeated

Put into cuneiform;

ag-ru
'hired mar'
ag-qi

- Of an
angry one ${ }^{4}$

Be sure to keep ak and ka distinct in your mind.



Transfiterate：

$\qquad$
Practice en．Be sure to keep it aistinct in your mind frort bu．


吸次
领 恍解 त并会

政 मर
repeated

104 The next sign is sa, wiff witten上 , Be sure to indent the top horizontal, or g日a will look like ix, a sign to be learned later. Try 오혀:


IJ5 The next sign is IKU，岛T ，a logogram for an area measure，with the Akkadian equivalent ikㄴ․ It is exactly like 보․，乍，except that It has a final vertical．Try $1 t: \longmapsto, \longmapsto$ ．
F－，鳥


With IKU the sIgn an，$r$ ，stands for the number one．The ag may be repeated up to five times to express the numbers one through five． Transliterate：
Transliterate：
$1 i i$ The next sign is GUR, vil, a logogram for at volurae measure. The Akkadian equivalent is guru. GUR somewhat resembles IKU, FTH , but it has no interlor verticals and two on the end.


With GUR the sign as, 5 , stands for the nuraber one. The ate may be repeated up ta mine times to express tho numbers one through nine. Transliterate:

vi
repeated

Put into cunoiforma
5 GUR

Practice GUR until you feel sure of it.


1 GUR
7 GUR


9 GUR

\# HT
Ht ज゙リ
$\pm 12$ The text sign is si, hT , which is exactiyl Like GUR, FiT , except that the top horizontal
15 longer in si.




Put into cuneiform:

si-2n
(no meaning )
$\frac{\text { si-si-ik-tn }}{\text { 'hem' }}$

## फ़ा

repeated

Practice si until yon feel some confidence with it. Be sure to keep it distinct in your mind from gur.


115 The next sign is SAG, hifliz a logogram for 'head, top', with the Akkadian equivalent rētur.
Its iftrst element is si, 惊, and its second is pa. 舞 , a sign to be learned later.


| SAG SAG | SAG |  | SAG | SAG |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| SAG |  |  |  |  |





## Section Two

QU1Z

15. DINGIR


## ANSWERS

| 1．${ }_{\text {N }}$ | 2． 1 | 3．销说 | 4．以F\％ | 5．婦 |
| :---: | :---: | :---: | :---: | :---: |
| 6．$r^{2} \frac{1}{4}$ | 7． | 最． F | 9．FT\％ | 10．10， 12 |
| 11．Frix | 12．तो | 13． | 14． 14. | 15．17 |
| 16．Deta | 17．上早管 | 18．$x^{2}$ | 19．豆 | 20．bex |
| 21． 776 | 22．1機 | $23 . F \hat{F}$ | 24．Waid | 25．420 |
| 26．मुना | 27．krif | 2B．$\quad$ FT | 29．1F | 30． 10 |

If you forgot one gign，practice it hefe and then go on to Sectlon Three．IF you Forgc－more than one，go back to the places where they were first presenteg and work through the parts dealing with them；then go on to Section Three．

Signt
：


## Section Three

128 The next sign is ab，娟，It be－ gins exactly like 초期，but instead of a diagonal it has a vertical at the end． Try it：，洰 ，品－

$\qquad$

Put into cuneiform：
ba－ab－tu＇city quarter＇
ap－tu＇window＇
repeated
$\square$


Transliterate：

$$
\text { Hr } \quad=
$$


$\cdots$ $\qquad$
$\square$

Practice $a b$ and be sure to keep it distinct In your mind from tum．


130 The next sign，uk，Lg，lug，Fir ，begins lake ab but has two elements inscribed．The last element in uk ls of，the sigma UTU，co be learned later．Its presence may be a memory aid to resound scribes that uk，like UTT，begins with



Transliterate：


F
repeated

Put into cuneiform：
（no meaning）

tu－uk－ka－an－ruu＇bag＇


Practice uk until you feel sure of it．


WK THE

评

奖页
repeated
 uk except for the last interior element. This element is the sign sa, 77 , which will be learned later; it may have been put in is to reand scribes that the sounds which as represented also included a sound s. s . $\underline{\underline{s}}$ is the tyansliteraction for a sybillant conventionally pronounced as if it were English ts.)



Transliterate:



$$
=
$$

$\qquad$
Transliterate:

Put into cunciform:
as-mu-uk (no meaning)

*ik-ka-ab-ba-as 'he walks in'


Eractice as and uk until you are sure of them.


334 The next sign, um, Fri , again begins more or less like $a b$, , but has three final verticals instead of one:F, , 南, $\mathrm{F}_{\mathrm{F}}^{\boldsymbol{I} T \mathrm{~T}}$. Try un.


 it ends in three verticals but begins differ-



Fill
Transliterate:


$=$ $\qquad$
$\qquad$

Put into cuneiform:


Practice ta and um until you feel sure you can tell them apart.


率雨


(xi

142 The next sign，i，hE ，has no verticals： $F$ ，Try it：


Transliterate：

$=$

㕸
repeated
战 H et rit

Put into cuneiform：
2－ta－思u＇they say＇ $1-12$＇my god＇

$\frac{1-\mathrm{ba}-\mathrm{ga}-\mathrm{ru}}{\text { they start }}$
a law suit＇
＇，inc calls＇

Practice $\underline{i}$ until you feel sure of it．

## 战 1 水准

际 珹

## 会

repeated

142a The next sign is ia，Filly，which is simply a carobination of $\underline{\underline{i}}$ ，曻，and a 角， a sign to be learned later．



Transliterate：



# 际需 

repeated
\＃ut Into cuneiform：
ia－nu ，it is not＂

be－1i－ia
10 $\frac{1}{2}$ my
lord r



Practice ia until you feel sure of it．Keep
है神 it distinct in your mind from $\underline{i}$－



战叔
repeated

144 The next sign is DUMU, 战, a legogram ग्रeankng 'son', with the Akkadian translation mara. It is exactly 11 ke i, 俎, except that it has a vertical wedge inserted at the rear.


| DUYU | DUNE | DUMU | DUR | DUMU |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Transliterate:


145 At，ad．begins like i，战 has a final vertical：$F$ ，$k=$ F F＇ but Try it：


图事
repeated
 kt，plus another vertical．Try it：


Transliterate：


腤非情

Put into cuneiform：

```
空i－ru＇extraordinary＇
```


n $\longrightarrow$

FIT
repeated



152 The next sign is 苗ar，鲃以 ，which begins with two horizontals and somewhat resembles ka，湎期，at the end．Try vt：
锶 ，部学 。


Transliterate：


笛皆
repeated

Put into cuneiform：
$\frac{\text { sar－rı－rut }}{\text { stooping＂}}$


Practice 点ar until you feel sure of it． Keep it distinct in your rind from ka．


保 男


172 The next sign is bi，the acute accent on the bi shows that this sign is the second in theoretical frequency in signs that are read bi．A grave accent，＂，would show a sign is third in frequency．AFter that subscribed fum－ bors are used to distinguish 5 ins in transliter－ action，like $\mathrm{Hi}_{5}$ ．
 sign to be learned later．
Try bl：ma，ra ，bt ，验


Tramsifterate：
边宜 HT K KK


Put into cuneiform：

$\frac{\mathrm{bi}-工 \pm-\mathrm{ti}}{\mathrm{OE}} \frac{\mathrm{an}}{\mathrm{an}}$ alley＇

＊iq－bí



## Section Three

QUIZ


## ANSWERS

| 1．阿舟 | 2．跧年 | 3．Has | 4． Fb | 5.4 |
| :---: | :---: | :---: | :---: | :---: |
| 5．喪管 |  | 3．${ }^{\text {b }}$ | 9． m | 10．匆 |
| 21． 1 年 | 22． $5^{5}$ | 13．174．46 | 14． Hes $^{3}$ |  |
| 16． H | 17．5或的 | 18．植 | 19．月卧 |  |
| 21．788 | 22． $\mathrm{HF}^{\text {P }}$ | 23． | 24． H （T） | 25． M （T |
| 26．市 | 27．घो | 28，जा | 29．${ }^{2}$ | 30．抎 |
| 31.5 | 32．hKK | 33．6す？ | 34． $\mathbf{7}^{4}$ | 35.5 |
| 35.10 Cr | 37．rFry | 30． 5 | 39．हो斤 | 40． 3 4 |
| 41．1780 | 42.74 | 43．7－ | 44． H | 45．H2］ |

If you forgot a sigh，practice it here and then go on to Section Four．If you forgot mare than one，go back to the parts where they were presented and do the exercises for thoac signs．Then gin on ta Section Four．
sign $\qquad$ ；


## Section Four

205 The next sign 15 11，max ，made Fo，HT，Kith ，Try it
il
$i 1$

| il |  |
| :---: | :---: | :---: |
|  |  |

解至
put into cuneiform
11－1f of a special one＇


Remember that 11 has two verticals as well as two diagonals．
 Practice 11：


दूता 情际

Fix il
repeated


207 The noxt gign in tum, HilE . It begine somemat like du, but ends in
four horizontals. Try it: $F$, tro , fity , FARE.

际 . Try 1t:


Transilterate:

Put into eunefform:

ru-us-ti
'of Eine oil"
${ }^{\text {*quans }}$ 'his bow
He

ropeatea


212 The next sign, is, \%TM, resembles us, ffft , but lacks the two srterior verticals and
 Try it:

| i首 | is | is | is | i臽 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| is | $1 s$ | 15 | 15 | 18 |

Transliterate:

214 The next $5 i g n$ bi，$\zeta \checkmark$ ，is composed of two be＇s，He Fry it：，


Transliterate：


盟 is a simple sig an；the only problem with It is to keep it distinct in your mind Exam be， Practice both．

F मार $\vdash \longmapsto$
be
$b \pm$
be
bi


231 The next sign ia ni，度，made，
F ，际 ．Try it：
ni
ni
ni
n 1
ni


Transliterate：
H7 算 的
$=$ $\qquad$
$\qquad$

## $\sqrt{77}$

repeated
阵 気

Put into cuneiform：
an－ni－is
＇hare＇
n1－ab－an－nu
＇（a month－ name）＇

Practice ni until you feel sure of it．
 rr y 屚


|  |  |
| :--- | :--- |
| Ff <br> repeated |  |
|  |  |



295 The next 3 gn is pa, $\mathrm{H}^{2}$. Beginning like 32. $\sqrt{\text { 需 , it has a single vertical that cuts }}$ both lines: , , 汚, Try it:



296 The next sign $\ddagger s \mathrm{Gr}$ ，展 ，a logogram for ＇wood＇with the Axkadian equivalent issu．It is also used as a determinative before names of wooden objects．Further，it has the value is （iiz，isㅇ as a sytlabic value．It $l_{s}$ exactly Iike pa，，except that its horizantals do not cut the vertical．Try $4 t: 4$, 届，


产
repcated
 ＇ox＇with the Akkadian equivalent alpu，It is GIS with twa diagorals following．Try it： $\boldsymbol{H}$ ，届，鱼多



298 The next sign, al, 周解, begins with GIS but has an additional $55 \mathrm{~F}^{\circ}$. It is written
 Tғy 7t:



Put into cumelform:


1a-al-1a-xu
'lamentation priest'
$\frac{\text { ta-al-1a-sk }}{\text { 'yout go' }}$


306 the next sign is up, wb. Ff . which begins Like GIE, but has diagonal wedges attached:



F
repeated

308 The nnxt sign is e. Fif . If toa starts like GIS, but has another vertical mado up of two smaller verticals: Try it:


| e |
| :--- |



318 The next sign is ur, Fits , The acute accent on the $\underline{u}$ indicates that this sign is the second in theoretical frequency of signs that are read <compat>ᄇ<compat>ᅳ<compat>ᄋ.



## Section Four

QU1\%


| 55. ia | 56. ta | 5. ik | 5月. 51. | at | 60.DINGIR |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

## ANSWERS

| 2．rs | 2．$\overbrace{}^{2}$ | 3． | 4．粦 | 5． 7 PK $2 \times$ | 6． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7．196 | 6． 8 | 9．场 | 10．南市 | 11． $\mathrm{Fin}^{4}$ | 12． 52 |
| 13． $\mathrm{F}^{\text {a }}$ | 14．7柿 | 15．琾 | 16．新 | 17．6年 | 18． 1 हो |
|  | 20．2年 | 21.0 析等 | 22．17 | 23．准 | 24.15 |
| 25． $\mathrm{H}_{4}^{2} 7$ | 26．誫 | 27．HKT | 28．为 $⿻ 上 丨^{\text {c }}$ | 29．r献宜 | 30.17 Im |
| 31.8 | 32.675 | 33.7 | 34． 24 | 35．129 | 36.85 |
| 37．${ }^{\text {最 }}$ | 38．镕 | 39.51 | 40．Mr | 41．策家 | 42． 28 |
| 43．7每年 | 44．策 | 45．鸟乐 | 46． m － T | 47．年 | 48.74 |
| 49.4 | 50． 5 | 51．${ }^{\text {F }}$ | 52．大ar | 53．th | 54. ifla |
| 55．${ }^{\text {chat }}$ | 56．．1．tr | 57．Prit | 58．भो | 59．敌第 | 60．H7 |

If you missed a sign，practice it here．If you missed more than ane，go back to the part where each sign was first presented and work through it again．Then ga an to section Five．

Sign $\qquad$ ：


## Section Five

319 The next siqn is gà, ga, 用T反, which is like ㅆ. FTFF, except for its final diagonals.



324 The next sign is $\dot{E}$ ，न̈lff，a logogram for ＇hause＇with the Akkadian translation bitu．It is very such like 解，解F，but it has four verticais and no trailing horizontals．Try it：



Transiiterate：F户न होग


Put into cuheiform：

Practice entil you feel gure of it．Keep it dastinct in your mind from $\underline{u}^{\prime}$ ．


ज्ञात क्याण

际定

प्रोता
fepeated


330 The next sign is Li，a logogram for ＇man＇，translated by Akkadian amilu．It is also wised as a determinative before names of proffer－ sins．Lí begins like ra，氐il ，but ends with three horizontals above three verticals．



Tranalıterate：


届莘
repeated



334 The next sign is 1t. 1d, FetT, which resembies am, $k A$, with an additional 'kroken' horizontal and vertical: th " Hz , bix , phe Try it:


335 Da, fin , is very like it, but da has two
 Try it:


Put into cuneiform:

*ti-da 'you knew' $\frac{\text { da-ri-is }}{\text { forever }}$ in your mind from it.

 HE G
repented


343 The next sign is GAL，気，a logogram for ＇great＇，translated by Akkadian rabur．It is ma，目 ，with a trailing horizontal．Try it：明，首－


Transliterate：


353 The next sign is sa，，sifullar to da，




Put into cuneiform：
siz－du ＇mountain＇

，to ga－sa－ru be strong，

sx－mu
＇to buy＇

Practice 奇 and da．


客而减


畑
repeated

354 The next sign is 美，皆 ：ط，辝 ．Unlike 态，鸟＇s bottom horizontal is longer than the others．Try it：

repeated

367 The next sign is 炎e，＊＊which is the second element in the sign mu，rex．It is written 4 ， $4_{k}$ ， $\mathrm{K}_{\mathrm{K}}$ ．Try it；


371 The next sign is pu，bu，$x$ ，which ia 㗐o




Put into cuneiform：


## na－but

＇to call＇
pu－xi－du
＇leg＇

Practice pu to keep it distinct in your wind from 픈．

s kr （4）致至睤？
$41+4$
repeated

$39 i$ The next sign, <T has several values.
Tho followlng logographic values are most common: UTU $=$ Šama角 'the sun god', BABBAR $=$ peşũ 'white, shlinithg', and $U_{4}=\underline{\underline{4} m}$ 'day'. It also has tho syllabic values tam and ut, ud. We will refer to it as the UTU aign, but only the context san show you whlch reading to use. UTV is the last element inscribed in the sign the, Try it:

| UTU UTU | UTU | UTU | UTU |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |
| UTU |  |  |  |  |

repeated

AT MTA
$=$
dury-mu-ba-
al-11-1t
'Samak-makes
live' (a
personal
name)
tam-gl-tl
of a joyous
song

Put into cuneiform:


383 Tho next sign 1s wa，AT ，also read wi， wu，or pi．It consists of UrU，\＆，plus a⿱丷⿱一⿴⿻儿口一寸⿰㇒⿻二丨冂刂灬， r ．Try it：

| wa wa wa | wa |  | wa |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| wa | wa | wa | wa | wat |



## seclion Pive

QUIZ



## ANSWERS

| 1．易上 | 2．FEF | 3．际公 | 4． Hz | 5．Fan＇ |
| :---: | :---: | :---: | :---: | :---: |
| 6．${ }^{\text {－}}$ | 7．䎟 | B．抨 | 9．恨 | 10．限 |
| 11．姩 | 12．皆 | 13．阿 | 14．$上$ 而 | 15．Her |
| 16．敉 | 17．Ferim | 18．炋－ | 19．占可 | 20．AT |
| 21． | 22．戒 | 23． 18.74 | 24．${ }^{\text {2 }}$ | 25．管 |
| 26．作甪 | 27．F | 28．\＃\＃ | 29．忟哏 | 30．以⿵冂 |
|  | 32．故近 | 33．हागF | 34．F－ | 35．年交平 |
| 36.1 होग | 37.17 | 38.48 | 39．5䢒 | 40．该 |
| 41．产 | 42．2－ | 43．होगा | 44．होग | 45．第析 |
| 46．r | 47． | 48．हीП | 49．H0\％ | 50．71－ |
| 51．Arr | 52．㐌 | 53． 4 － | 54．H2 | 55．rikt |
| 56.4 紈 | 57．第 | 58． $\mathrm{tan}^{2}$ | 59．H－ | 60．50） |
| 61．1717 | 62． $\mathrm{h}_{2}=$ | 63．以7 | 64．W | 65．74 |
| 65． 6173 | 67．LTM | 68． 1 Hel｜ | 69．7Tcy | 70.15 |
| 71． Nr | 72．閂 | 73．108 | 74．家 | 75．14．7x |

If you missed one Eign，practice it here，If you missad gore than one，go back to the places where those gigns were first presented and work through the sections on each again． Then go on to Section Six．
sign $\qquad$ ：


## Section Six

 ＇heart＇，translated by Akkadian Libbu．It 1白 UTU，A ，with two following vertiesls．Try it：＊，开 ，${ }^{1}$ TIT



396 The next sign is pi, $\Delta$. It is the lest element of gi, mri . Try it:


Transliterate:
豆


Put into cuneiform:


398 The next sign is ah, if, eb, uy, Atroff. It begine with hi, Aht, Ahrt, Tryity


Put into cumelform:


399 The next sign is im，em，\＆rfor ．It is the reverse of gi，供\＆，Try it：


Transliterate：
及讲 届 होग $\qquad$ repeated

$=$ $\qquad$

Put into cunerform：
2m－du－um
＇support＇

| ni－2A $1-1 i=1 \times 0$＇oath of a god＇ |
| :---: |
|  |



Praetice im and kesp it distinct in your mind Erom gi．


屏

公斩目

A年䄯 174
repeated

406 The next sign is kan，$\langle$ the It is used as a syllabic value，but it is also used as a logo－ gram，read KAM，to indicate that tho preceding align is to be read as a number．The logographic Use will be encountered later when we have learned some number signs．Kan is bi，\＆，pius be， $\mathcal{L}$－Try it：$A, A$ ，Ab，


Transliterate：
A以 A以卧 明
$=\ldots-\ldots+$ HT \＆W CTN：
$\qquad$

Put into cuneiform：

kam－nta－al Bnr－ru－ti＇adversafy（z）of kingship＇


Practice kant until you feel sure of it．
$A 1-6$ Keep it distinct in your mind from ab．


411 The next sign is the logogram for the number 10. $<$, read $U$ in Sumerian and eger in Akkadian. It is merely a single diagonal wedge. Try it:


Transliterate:
AT \& AW



- $\qquad$

Fut into cuneiform:
$\mathrm{T}_{4}$ IO-KAM


427 The nexL sign is mi，which buging with t．Try it：$\ell$, ，


Put into curtiform：
＊Mi－gi－ir－i－li＇assent of god＇（a personal name）
Translifterate：

 $\qquad$
$\square$

Practice mi untal you gool surg of it．

$\frac{y m-m i x-x}{\text { of his }}$
mother
$\frac{\text { mi－1矣－ru－um }}{\text {＇border }}$
竍
repeated
部 以


433 The next feign ia nim 人 , which tarts like min $\frac{\text { mit }}{}$, but ends in a diagonal wedge and a vertical wodge. Try it: $\mathbb{R}^{2-}$, ty, by.


Fanslilerate:
4) -ar fill


## <

repeated

Put into cuneiform:

n. $1 \mathrm{~m}-5 \mathrm{~L}$
'leopard.
nim-gal-1i
$\frac{1 \nu-Y_{1}}{4}$ !a siege device:'
i-sa-pu-ru-nim 'they will send to me'


435 The next sign is lam，रطit which is dis－ tinguished from nim，信 ，by having one more



Practice lam until your feel sure of it．Be sure to kep it distinct in your mind from adm． | lam nim | lam | nim |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| Mam |  |  |  |  |


5



437 The next sign is AMAR，th，a lagagramifor ＇calf＇，with the Akkadian tranglation biru．It resembles mi，〈



Put into cunelform：
© AMAR．UTV＝Marduk（a ggà）


AMAR－ni
＇our calı＂
AMAR，GA＝
būr skzbi
＇suckling＇
（literally
＇cale of
AMAR．EN．ZUEButr－Sîn（a personai name） MI子k＇）

Practice AMAR until you feei sure of it．Be sure not to confuse $2 t$ with mi．


1＋7《类

M＂F

化

441 The next aign in ul, 侯t, which is $\mathrm{GU}_{4}$,高i , preceded by $U_{1} \leqslant$.



449 The rext sign is 大it, रु , which also starts with U. Try itis , < , 《Tr.



451 The next sign is ag, 人BrikT, which is git, fith, plus El, FTrM . Try 1t:

$\qquad$

人备，pins lu，廌，a sign to be Learned later．This sign is frequently used for the ward



Trans I Iterate：
 incant EDT

$\qquad$
Pant inca cuneiform：
un－mu i Duns＇father and son＇

Practice $\ddagger$ until you feel sure of $4 t$ ．

$\frac{\text { suras－ru ù }}{\frac{r u-b u}{\text { king and }}}$
king and
noble


人円न
repeated


乡T 次人际斯

人णन
repeated

457 the next sign is di，人竍，composed of $\mathrm{U}_{\text {，}}$人 ，plus a vertical，plus pa，㤽，



Put into cuneiform：
ti－d1＇you know＇


年㡽
repeated


－Kर ब（T）《角 区

An＜
＝

－
$=$

Practice die until you feel sure of it．

| $d i$ | $d i$ | $d i$ | $d i$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | $d i$ | $d i$ | $d i$ | $d i$ |

On the next pages is a quiz on ail the signs studied so far．

人烸
repeated

## Section Six

QUIZ



## ANSWERS

| 1． | 2． 1 ¢ | 3．ATM | 4．［－ | 5．${ }^{\text {a }}$ | 6． H |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7．䙺 | 8．H | 9．陙 | 10．F析 | 11． 4 Writ | 12．Mikt |
| 13.15 | 14．has | 15．${ }^{5}$ | 16． F | 17． | 18． 5 －${ }^{\text {ck }}$ |
| 19.45 | 20．27－ | 21．证每－ | 22．Het | 23．18，等年 | 24． 6 |
| 25． 8 \％it | 26．${ }^{2}{ }^{2}$ | 27． 2 KT 4 |  | 29.8 | 30．目 |
| 31． | 32． 5 上包 | 33.54 | 34．भार | 35．AT | 36． 4 －7m＝ |
| 37．67 | 38．मद | 39．作佼 | 40．風7 | 41．师 | 42．新 |
| 43．चtrix | 44．${ }^{\text {\％}}$ |  | 46．क्नाय | 47．जाँा | 98． $\mathrm{H=}$ |
| ง9．炮交 | 50．44 |  | 52．間 | 53．同 | 54.4 成 |
| 55．Wh | 56．际 | 57． | 5日．）卜サ斤 | 59．乍 $\pi$ | 60．＜Th |
| 61．${ }^{\text {年 }}$ | 62．慗 | 63．以阿 | 64.5 | 65．k | 66．曲姣 |
| 67．71年 | 68.175 | 69.15 | 70.6 | 71．${ }^{\text {¢ }}$ 7 | 72．岛才 |
| 73．kos |  | 75．＜－s | 76. 年 | 77． $\mathrm{H}_{\text {\％}}$ | 78.1 |
| 79．成的 | 80. 它牙 | 81． H に年 | 82.4 | 83.10 | 84．飬 |
| 85．bin | 86．${ }_{\text {¢ }}$ | 87．H57 | 88.4 AK | 89.6 | 90．解 |

If you missed one aign，practice it here．If you misged more than one，go back to the places where the aigns were first presented and work again through those parts．Then go on to Section Seven．

Sign $\qquad$ $:$

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

## Section Seven

461 The next sign is kt，く目，consisting of




458 The next oign is kV ，《有，a logogram for ＇pure＇，translated by Axkadian ellu．Try it：〈，作，传。


Put into cuneiform：


KUे，BABBAR＝
kaspu
＇silver＂
LÚ．KÙ．ZU＝
$\frac{\text { engls }}{\text { Wise }}$




480 The next sign is DIS，$T$ ，a logogram for the number 1 ，Akkadian 甜到．It is not to be con－ fused with a当，，which also consists of a single wedge．Try it：

transliterate：

人 T 名以


532 The next sign is pe，Th ，which is $s$ vertical plus as⿱丷天心．$\quad$ ．Try it：



533 The next sign is MES，The ，a logogram in－ dicating the plural．It is a ligature of me， Tr ，and ed，炏 ．Try it：Tr ，To，To sic．



535 The next sign, which begins like me, is lb,



NT
repeated


537 The next sign 1s 1u. Jhe , which ls the second elemsent in $\underline{\underline{u}}$, fitpipi, It $1 s$ tha game as ku but with ore more vertical following. Try lt:


Qut anto cunelform:
wa-立a-1u 'so carry'

llet me eat'

Practico 14 to keep it distinct in your mind from kt.


 - 际

554 The next sign is SAL，\＄，a logogram for ＇woman＇，Akkadian Eimnistu．It is used as a determinative beforo women＇s personal and pro－ fusional names．It also has the reading GEME ＇female slave＇with the Akkadian translation amtu．SAL beqirs like the middle element in up， ，and has a horizontal at the end． Try it：$\},\}^{k}$ ．


Transliterate：
全（T）Th

＊ $\qquad$

SAL ＇Female witness．
SAL
＇Eomale
dream interpreter＇

Put into suneiform:


Section Soven

## QUIZ




## ANSWERS

| 1．ATV | 2． |  | 4． H |  |
| :---: | :---: | :---: | :---: | :---: |
| 6．㡀 | 7．伎 | 8． F － | 9．挴 | 10．Ah |
| 12．年－ | 12． $\mathrm{H⿰丿}$ \％ | 13．${ }^{4}$ \＃7 | 14．085 | 15．${ }^{\text {k }}$ |
| 16．作年 | 17． $\mathrm{ra}^{\text {co }}$ | 19．以下 | 19． 5 | 20． |
| 21． $\mathrm{H}^{\text {r }}$ | 22．月际 | 23．AT | 24.5 | 25． F － |
| 26．以本舟 | 27. माब | 28． EAF | 29．${ }^{\text {cin }}$ | 30．Fik |
| 31．6\％ | 32． 6 | 33．4k | 34． 74 | 35. 年T |
| 36． F 析 | 37．凩 | 38． 7 73 | 39．${ }^{\text {4 }}$ | 40．＜thert？ |
| 41．年昰 | 42．阰 | 43．177 | 44． | 45．岛－4 |
| 46． ¢ $_{\text {ch }}$ | 47．74 | 4日． 2 ¢ | 49．WXTA | 50．47\％ |
| 51． $17 \%$ | 52． | 53． $\mathbf{F}_{6}$ Th | 54. नार्य | 55．${ }^{2}$ |
| 56．rn | 57． | 58．＜入\％ | 59．4 4 W7R | 60．止戒 |
| 62． 58 | 62．7－ | 63.1 | 64．或 | 65．fill |
|  | 67.51 | 68．480 | 69．7 | 70．式 |
|  | 72． r 年 | 73．肺 | 74．दोगा | 75．上罂 |
| 76．¢ौTTF | 77．包 | 78.12 | 79．戒 | 80． 7 |
| 81．20\％\％ | B2．䄯A | B3． $\mathrm{ms}^{\text {c }}$ | 84．怜耍 | B5．तथ ${ }^{\text {¢ }}$ |
| 86．A17 | 87．Eiti | 珀，佔 | 89． | 90． $\mathrm{H}_{2} \mathrm{C}_{1}$ |
| 91. | 92．Tratk | 93． | 94． 24 | 95． $\mathbf{r}_{5}^{\square}$ |
| 96． 4 ¢ ${ }^{\text {a }}$ | 97． FF | 98． 58 | 99．7具空 | 100.4 |

If you missed one sign，prastlce it here．If you missed more than one，return to the sections where the slgns were first introduced and work again through them．

Slgn $\qquad$ ：


## Section Eight

556 The next sign ls min，俎登 which ias SAL， \＆．plus ma．El ．As a iogogram read NIN the sign means＇lady＇and ls translated by Akkadian



Transliterate；
或 勋

Put Into cuneiform；

$$
\mathbf{a}_{\text {NI }}, \mathrm{CAL}-\mathrm{Um}-\boldsymbol{n i}
$$

＇the goddess Ningal is my mather＇

tannin－
＇his equal＇
la $\mathrm{tm}=\pi \times n-n j$
do not punish m＇s＇

Practice min until you fend sure of it． Keep it distinct in your mind from sal．


| Sin | SAL | gin | SAL | min |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| nina | nit | Min | $n i n$ | Min |

椋
repeated


> (a personal name)

> *nin-da-bu 'bread offering'

557 The next sign is dam，fo tr ，which is exactly the same as min，解，except for ono additional horizontal wedge in the ma olomont． As a logogram it is road haM and means＇spouse＇ with the Akkadian equivalent mutt＇husband＇and




Fut into cuneiform:

dam-tan is t-gu-ux 'he heaped up destruction ff:'

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

Practice dam until you feel sure of it. Be sure to keep it distinct in your mind from nim.


 518或

repeated

564 The next sign is on, Ht , composed of SAL's first element, plus si plus a vertical.



Transliterate:
दैजा Tr 雷


$$
\begin{aligned}
& =\square \\
& =\square
\end{aligned}
$$

रैमा reported

Put into cuneiform:


Al-me-tu '(a stone)' el-1i-bu (a plant)

Practice el until you feel sure of it.



565 The next sign is tum, tit , which begins like SAL, fo but ends in four horizontals.



Transliterate:


$=-\square-\cdots \sim$

Put into cuneiform

$\frac{3-u k-1 u-1 u \pi}{\text { to }}$
complete'
$\frac{\text { gl-ml-11-1um }}{\text { bact of }}$
kindness ${ }^{4}$


570 The next sign is MIN，TV，a logodran for the number 2，translated by Akkadian sina．It is simply two DIŜ nigns，$Y$ ．Try it：

| MIN | MIN | MIN | MIN | MIN |
| :--- | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | MIN |  | MIN | MIN |

TransIlterate：
जाता $\pi$ A Ama

$\qquad$
$\pi$
repeated ＝ $\qquad$

Put into cunelform：
$U_{4} 12\{=10+2 i-K A M \quad$ twelfth day house＇

SAG．MMAR
2－КА．
＂second head （of）calf．

个くत゙ A以 | MIN | MIN | MIN | MIN | MIN |
| :--- | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| MIN |  |  |  |  |


$\Gamma$
repeated

575 The next sign is ur，Why ，which is the opposite of in，THis＊Io has the element me， Tr，first．Try ur．


Transliterate：



可要

Put into cuneiform


Practice ur until you feel sure of it．Keep it distinct in your mind from ib．

䈣 $n$ ？可

HT

714 7
repeated

579 The next sign is $\mathrm{a}_{\mathrm{g}}$ if ，the flnal element



Transliterate：
7

| $\text { 占 } 5$ |
| :---: |
|  |  |

－ $\qquad$
 $\qquad$ $=$ $=$ $\qquad$

Put into cuneiform：


Practico a until you feel 5 ure of it．

 T年然枟多
ropeated

58G The naxt sign is ह阝，za．靬，which is the Einal inscribed element in ag，Fy，


Transiiterate：
开减化

Put into cunelform：


Practice sa utifil you fecl sure of it．Be sure to keep it distirct in your mind from 크．


毕 开解
战学作不㛀

昔
repeated


证

595 The next sign is Gik，fill ，a logagram for ＇sheqel＇，a amall measure of weight equivalent to about 8.33 qrams in some periods；the Akkadian
 FIN，㰤界

| GíN Gín GíN | GíN | Gín |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| GIN | GIN | GIN | GIN | GIR |

Tranelfterate：

人 Tilig 程 月金
$\qquad$
［ H 管
repeated

Put into cureiform：

i＝na ！Gín GRL＇aceording to one large sheçel＇ |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |



1 Gín
K亡े．as BEaR
${ }^{1} 1$ aheqel
silver＇
10 Gin
Kù，GI
， 10 sheqels gold ${ }^{\prime}$

Practice GîN until you feel sure af ft．


战
辟白荘而 品报不 ヶダ教

## 险整

repeated

You have now atudied the baalc signs of the cumeiform syatem. If you have learned them, you may be justly proud of your achievement. The task of masterlng the cuneiform system liea now In learning other values for the signs you know and in learning the other, leas freqtently uacd signs. If the active method of sign learning has proven luaeful for you, you should try systematically to learn to recognize amd to produce signs that occur in your reading or which your teacher recommends.

On the following pages is a guiz over all the basic signs.

## EINAL QULZ




## ANSWERS

| 1．该 | 2．¢ौ¢ | 3．150］ | 4． 7 － 7 | 5． 4 浒 |
| :---: | :---: | :---: | :---: | :---: |
| 6． H | 7．成奢 | 8．${ }^{3} 5$ | 9．成为 | 10．（2） |
| 11．枓 | 12． $\mathrm{F}_{\text {合1 }}$ | 13．长 | 14．हैंता | 15． $\mathrm{m}^{\text {a }}$ |
| 16．At－ | 17．作 |  | 19．Fim | 20．尘 |
|  | 22. | 23．柘 | 24．减 | 25．WF |
| 26.76 | 27．1式 | 28． 6 | 29．全䆑 | 30．7 |
| 31. 灲 | $32.4 \%$ ¢ | 33.76 | 34． Fl | 35.4 |
| 36．NTT | 37． 7 Tr | 38．1－2x | 39．मानt |  |
| 41．属 | 42． 2 \％ | 43．thl？ | 44．出 | 45． CkT |
| 46．缞 | 47． 5 ¢ 4 | 48． 5 | 49．第而 | 50. 肘金 |
| 51． 1 | 52．＜ | 53． H | $54.04 \%$ | 55．年首 |
| 56．x\％ | 57．缾 | 50．4 | 59． FB CH | 60． $\mathrm{y}^{7}$ |
| 61．铂 | 62.77 | 63．470 | $64.7 \begin{gathered}\text { F／} \\ \end{gathered}$ | 65．$\sqrt{17}$ |
| 66．츄T | 67．H2＊ | 68．相县 | 69． 4 | 70．㷌 |
| 71．包 | 72．官 ${ }^{\text {c }}$ | 73． $\mathrm{k}^{\mathbf{k}}=$ | 74. | 75．$\dagger$ |
| 75．聞 | 77．12574 | 78．17\％ | 79．7 | 80．炧 |
| 时：信 | B2．${ }^{\text {\％}}$ | 83．A | 84．${ }^{\text {Hell }}$ | 65．719 |
|  | B7．Ema |  | 99．$<$ 解 | 90．到 |
| 91．माa7 | 92．$i^{p-c}$ | 93．Т－以 | 94． 2 戌事 | 95． Mc ¢ 4 |
| 96．卢新 | 97．在485 | 98． 1 年 | 99．7－ | 100．委发 |
| 101．＜Tr | 102．垪 | 103．${ }^{\text {4 }}$ |  | 105． FO |
| 106． 4 | 107．27m＝ | 108．成T | 109．FTT | 110． m ＜ |

If you missed one sign，practice it here．If you missed more than one，go back to the places whare the signs wera first presented and work again through those parts．

Sign $\qquad$ ：


Alphabetic wist of Values

Only values taught within thig workbook are listed here． Tha number to the rlght of the $s 1 \mathrm{gr}$ indicates the page num－ ber of the workbook where the stgn was first presented． 5lgns for numbers are grouped st the and of this list．

| a | Tf | 129 | D15 | T | 111 | ik | PRTK | 21 |
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| ag | 邪洜 | 2.6 |  |  |  | im | 㑒平 | 93 |
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| AMAR | 人 | 99 | ars | 唯呯 | 93 | is | Н | 63 |
| an | HF | 5 |  | 䂭 | 27 | is | F | 63 |
| ap | kt | 36 | 0 r | 人菫 | 61 | 18 | 断 | 58 |
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| ar | ＜Th＋i¢ | 102 | ga | Fint | 71 | 1： | \％ | 63 |
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Only values taught within this workbook are listed；the number to the right indicates the page number of the workbook where the sign was first presented．


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\＆qa 11
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$r$ be 13
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中T：nam 20
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